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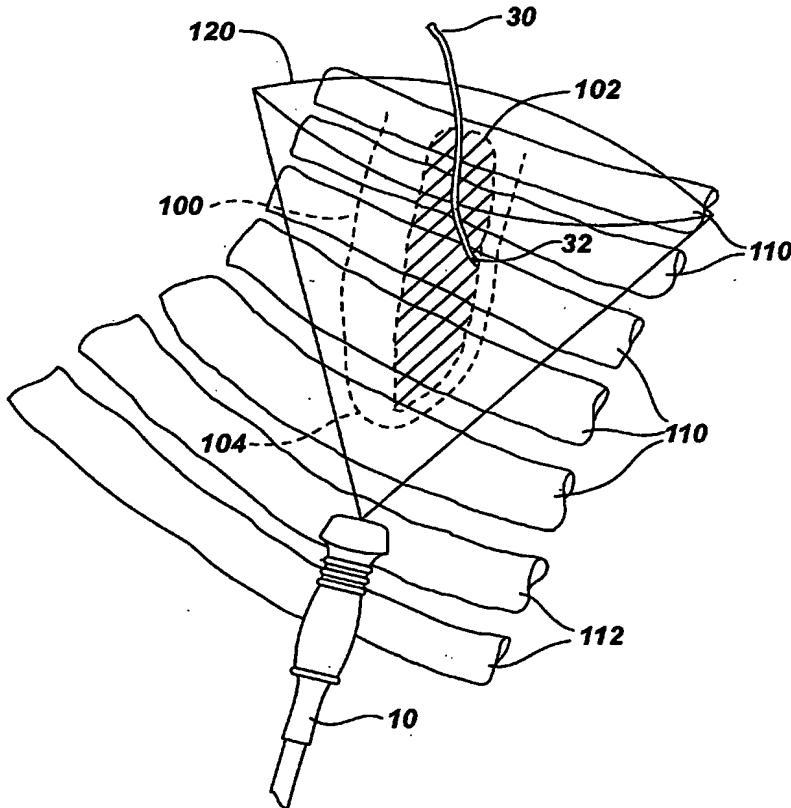
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- (71) Applicant (for all designated States except US): **KONINKLIJKE PHILIPS ELECTRONICS N.V. [NL/NL]**
Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).
- (72) Inventors; and
(75) Inventors/Applicants (for US only): **SALGO, Ivan**
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(54) Title: GUIDANCE OF INVASIVE MEDICAL DEVICES BY THREE DIMENSIONAL ULTRASONIC IMAGING



(57) Abstract: A three dimensional ultrasonic diagnostic imaging system is operated to guide or observe the operation of an invasive medical device (30) in three dimensions. An interventional system (20) is used to operate the invasive medical device (30) and produces spatially-based information relating to the activity of the invasive medical device (30). The spatially-based information from the interventional system (20) is merged into the three dimensional ultrasonic image data to produce a live three dimensional image of the invasive medical device (30) or its activity. In one embodiment the locations where the activity of the invasive medical device (30) is performed is recorded and displayed in the three dimensional ultrasonic image. The three dimensional ultrasonic image may be shown as an anatomical volume rendered image or as a wire frame model (130) of the anatomy. In another embodiment an integrated three dimensional ultrasonic imaging and invasive device system is described.

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